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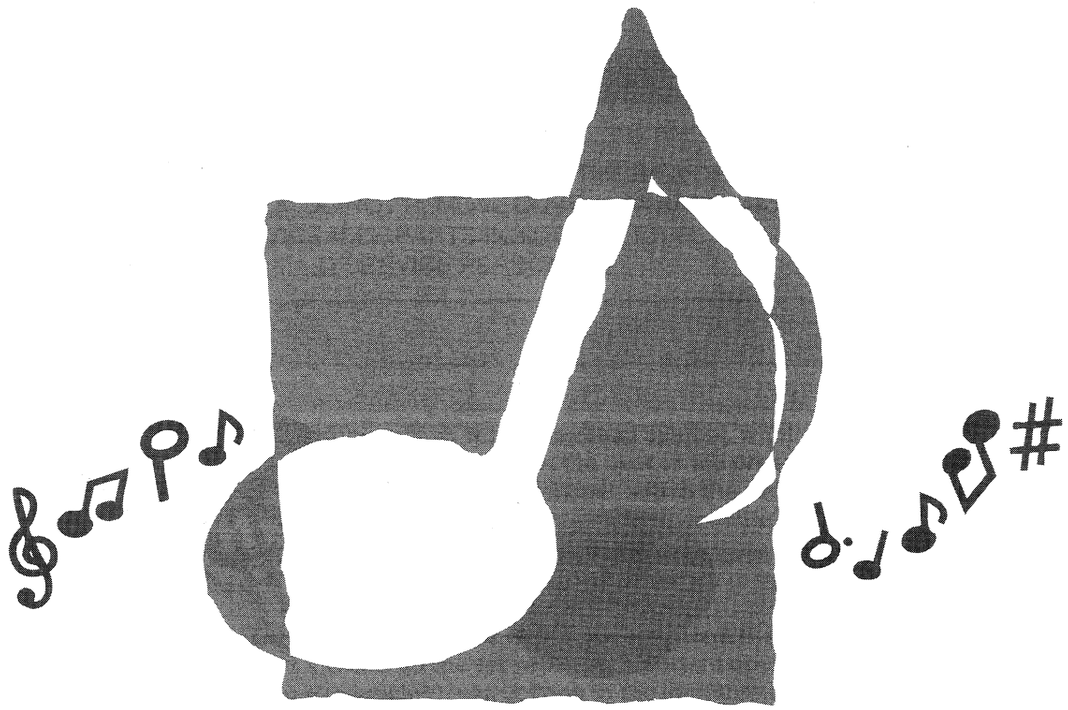
CELVIANO

AP-21/AP-23

USER'S GUIDE
GUÍA DEL USUARIO



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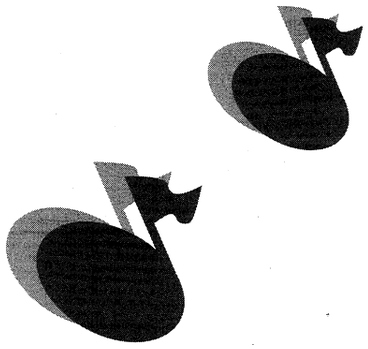

425A-E-002A

Introduction

Congratulations on your selection of the CASIO Digital Piano. This piano is a sophisticated musical instrument that blends the very best of traditional piano feel and sound quality with the latest that modern electronics technology has to offer.
Before using the instrument, be sure to carefully read through the instructions contained in this manual.

Please keep all information for future reference.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER -SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

CE
CASIO ELECTRONICS CO., LTD.
Unit 6, 1000
North Circular Road
London NW2 7JD, U.K.

This mark applies to the AP-21V/AP-23V only.
Please keep all information for future reference.

425A-E-003D

IMPORTANT SAFETY INSTRUCTIONS

"INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS"

WARNING – When using electric products, basic precautions should always be followed, including the following:

1. Read all the instructions before using the products.
2. To reduce the risk of injury, close supervision is necessary when a product is used near children.
3. Do not use this product near water – for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
4. This product should be used only with a stand that is recommended by the manufacturer.
5. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
6. The product should be located so that its location or position does not interfere with its proper ventilation.
7. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
8. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
9. This product may be equipped with a polarized line plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the plug.
10. Unplug this apparatus during lightning storms or when unused for long periods of time.
11. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
12. The product should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B Objects have fallen, or liquid has been spilled into the product; or
    C. The product has been exposed to rain; or
    D. The product does not appear to operate normally or exhibits a marked change in performance; or
    E. The product has been dropped, or the enclosure damaged.
13. Do not attempt to service the product beyond that described in the user - maintenance instructions. All other servicing should be referred to qualified service personnel.
14. Clean only with a damp cloth.
15. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

SAVE THESE INSTRUCTIONS

GROUNDING INSTRUCTIONS

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment - grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER – Improper connection of the equipment - grounding conductor can result in risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product – if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Safety Precautions

Symbols

Various symbols are used in this user's guide and on the product itself to ensure that the product is used safely and correctly, and to prevent injury to the user and other persons as well as damage to property. Those symbols along with their meanings are shown below.

⚠ WARNING

This indication stipulates matters that have the risk of causing death or serious injury if the product is operated incorrectly while ignoring this indication.

⚠ CAUTION

This indication stipulates matters that have the risk of causing injury as well as matters for which there is the likelihood of occurrence of physical damage only if the product is operated incorrectly while ignoring this indication.

Symbol Examples

This triangle symbol (△) means that the user should be careful. (The example at left indicates electrical shock caution.)

This circle with a line through it (⃠) means that the indicated action must not be performed. Indications within or nearby this symbol are specifically prohibited. (The example at left indicates that disassembly is prohibited.)

The black dot (●) means that the indicated action must be performed. Indications within this symbol are actions that are specifically instructed to be performed. (The example at left indicates that the power plug must be unplugged from the electrical socket.)

⚠ WARNING

Power source and voltage.

- Make sure that the power source you are using matches the rating marked on the instrument itself. Improper power can create the danger of fire or serious electrical shock.

Power cord handling.

- If the power cord should become damaged (exposed wires, disconnection, etc.), request replacement from your retailer or an authorized service provider. You will be charged for this replacement. Use of a damaged power cord may cause fire or electrical shock.
- Do not cut or damage the power cord. Also do not place heavy objects on top of it or subject it to excessive heat. Damage to the power cord may cause fire or electrical shock.

- Do not attempt to shape the power cord or subject it to excessive bending, twisting or pulling. This may cause fire or electrical shock.
- Use only the electrical cord that comes with the instrument. Use of another type of power cord can cause its insulation to melt or otherwise damage the cord, creating the danger of fire or electrical shock.

Do not locate the instrument or its stand on an uneven or unstable surface.

- Locating the instrument or its stand on an uneven or unstable surface can cause it to fall, creating the danger of personal injury. When using the stand that comes with the unit, be sure that all screws are securely tightened.

Do not place containers containing water or other liquids on the instrument.

- Do not place the following objects on the instrument. Placing such objects on the instrument may cause fire or electrical shock if they spill and get inside the instrument.

  - Containers filled with water or other liquids (including vases, potted plants, cups, cosmetics and medicines)
  - Small metal objects (including hairpins, sewing needles and coins)
  - Flammable objects

In the event a foreign object should happen to get inside the instrument, please take the following actions:

1. Turn off power.
2. Unplug the power cord from the wall outlet.

3. Consult with the dealer where you purchased the instrument or with an authorized CASIO service provider.

Do not disassemble or modify the instrument.

- Never attempt of take apart or modify the instrument, its accessories, or separately sold options. Doing so may cause fire, electrical shock or malfunction. Consult your dealer concerning all inspection, adjustment or repair of internal components.

Do not use the instrument if there is an abnormality or malfunction.

- Do not use the instrument if there appear to be abnormalities such as the presence of smoke or abnormal odor. Also do not use the instrument if there appear to be malfunctions such as power not coming on or sound not being produced. Use under such conditions may cause fire or electrical shock. In such cases, take the following actions immediately. Never attempt to repair the instrument yourself.

  1. Turn off power.
  2. Unplug the power cord from the wall outlet.

  3. Consult with the dealer where you purchased the instrument or with an authorized CASIO service provider.

When the instrument has been dropped:

- In the case the instrument has been dropped or damaged, take the following actions. Continued use may cause fire or electrical shock.

  1. Turn off power.
  2. Unplug the power cord from the wall outlet.

  3. Consult with the dealer where you purchased the instrument or with an authorized CASIO service provider.

Opening and closing the keyboard cover.

- Make sure the keyboard cover is fully open when using the instrument. To close the cover, hold it with your hand and gently lower it into place. Take care to avoid injury to your fingers when opening and closing the cover.

Keep plastic bags out of the reach of small children.

- Never allow anyone to place the plastic bags of the instrument, its accessories, and its separately sold options over their heads. Doing so may cause suffocation. Particular caution is required in homes with small children.

425A-E-006B

425A-E-007B

⚠ CAUTION

Power cord and plug

- Do not locate the power cord in close proximity to heaters or other heating appliances. This may cause the cord to melt leading to possible fire or electrical shock.

- When unplugging the power cord from an electrical outlet, always make sure to pull on the plug itself and not the cord. Pulling excessively on the cord may cause it to be damaged or break leading to possible fire or electrical shock.

- Do not touch the plug with wet hands when it is plugged in. This may cause electrical shock.

- When not using the instrument for a long period such as when traveling, always make sure to unplug the power cord from the electrical outlet for safety reasons.

- After use turn off the power switch of the instrument and unplug the power cord from the electrical outlet.
- At least once a year, unplug the power cord from the electrical outlet and clean the area around the prongs of the plug. Dust build up around the prongs can create the danger of fire.

Transport

- Take the following actions before moving the instrument. Remember that damage to the power cord can create the danger of fire or electrical shock.
  1. Unplug the power cord.
  2. Disconnect the pedal cable and other connecting cables.

Cleaning

- Before cleaning the instrument, make sure to first unplug the power cord from the electrical outlet.

Location

- Never locate the instrument in areas subject to high humidity or heavy accumulation of dust. Doing so may cause fire or electrical shock.
- Never locate the instrument in areas subject to grease splatters or steam, such as in a kitchen or near a humidifier. Doing so may cause fire or electrical shock.

Do not place the instrument on lacquered furniture.

- The instrument's silicone rubber feet may eventually blacken or scar lacquered surfaces. Use felt cloth pads to insulate the feet.

Do not place heavy objects on the instrument.

- Do not place heavy objects on the instrument. This may cause the instrument to tip over or break resulting in injury.

Volume

- Very high volume levels can damage hearing. Avoid using the instrument at very high volume settings for long periods. Consult with a physician immediately if you experience impaired hearing or ringing in the ears.

Do not get onto the instrument or stand.

- Do not crawl on top of the instrument or its stand. Particular caution is required in homes having small children. This may cause the instrument or stand to tip over and break resulting in injury.

About the stand.

- Keep the butterfly bolts that anchor the instrument to the stand securely tightened. Dropping the instrument can damage it or cause it to malfunction. When placing the instrument onto the stand, be careful that you do not pinch your hand between the instrument and stand. The instrument is quite heavy, so it should be moved or placed on the stand by at least two people.
- Changes in temperature and humidity can cause stand screws to become loose. This means you should occasionally check the tightness of all screws. Retighten loose screws as soon as you discover them. Dropping the instrument can result in injury.

425A-E-008D

Operational Precautions

Locating the Unit

Avoid the following locations.

- Areas exposed to direct sunlight and high humidity.
- Areas subjected to very low temperatures.
- Near a radio, TV, video deck, or tuner (unit can cause interference with audio or video signals)

Care of the Unit

- Never use benzene, alcohol, thinner or other such chemicals to clean the exterior of the unit.
- To clean the keyboard, use a soft cloth dampened with a weak solution of a mild neutral detergent and water. Wring out all excess moisture from the cloth before wiping.
- Severe impact can cause problems.
  When transporting the piano, use soft cloth to pack around the keyboard and buttons to protect them against damage.
- Never try to repair or modify any part of the piano.
  Any attempt to repair or modify the piano can cause problems with operation.
- Avoid using this piano near televisions, radios, etc.
  Because this piano uses digital circuitry, it may cause interference with other electronic devices such as televisions, radios, etc.
- In case of a problem, check that buttons and connections are correct, as indicated in this manual. If the piano still does not work properly, contact your retailer or a nearby dealer. Never try to repair the piano yourself.

Lithium Battery

This unit is equipped with a lithium battery to provide power needed to retain memory contents while unit power is turned off. Should the lithium battery go dead, all memory contents will be lost whenever you turn unit power off. The normal life of the lithium battery is five years from the time that the battery was installed. Be sure to periodically contact your retailer or authorized service provider to have the lithium battery replaced. Note that you will be charged separately for lithium battery replacement.

- Note that CASIO COMPUTER CO., LTD. shall not be held liable for any damages or losses or any claims by third parties arising from corruption or loss of data caused by malfunction or repair of the unit, or from battery replacement.

You may notice lines in the finish of the case of this piano. These lines are the result of the molding process used to shape the plastic of the case. They are not cracks or breaks in the plastic, and are no cause for concern.

NOTES

- Unauthorized reproduction of this manual in its entirety or in part is expressly forbidden. All rights reserved.
- CASIO COMPUTER CO., LTD. shall not be held liable for any damages or losses or any claims by third parties arising from use of this product or this manual.
- The contents of this manual are subject to change without notice.

425A-E-009A

Main Features

■ 8 versatile tones

- Eight instrument tones including piano and pipe organ provide plenty of performance versatility.
- An easy setting lets you control the brilliance of each tone, and a layer feature lets you assign two tones to sound simultaneously.
- Other features include digital effects that control the acoustical characteristic of tones, as well as three pedal effects for all the nuances of an acoustic piano.

■ 8 demo tunes

- Eight demo tunes demonstrate how to use each of the built-in tones.

■ Memory

- Built-in memory lets you store up to two separate performances for later playback.
  You can play along with playback on the keyboard, and even create an ensemble effect by using a keyboard tone that is different from the recorded tone.

■ Powerful keyboard setting functions

- A selection of powerful keyboard setting functions help you get create exactly the musical mood you want.
  Transpose adjusts the key of the keyboard in semitone steps.
  Tuning provides a means to tune with another musical instrument.
  Touch Select adjusts the intensity of the output sound in accordance with the amount of pressure you apply to the keyboard.

■ Variable temperament, Baroque pitch

- Select from a variety of temperament settings and Baroque pitch for realistic play of classical pieces.

■ MIDI terminal

- Connecting to another MIDI musical instrument lets you play two instruments from the keyboard of your CELVIANO. You can also connect to a commercially available MIDI sequencer to increase the number of parts you can play.

425A-E-010A

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MIDI Implementation Chart

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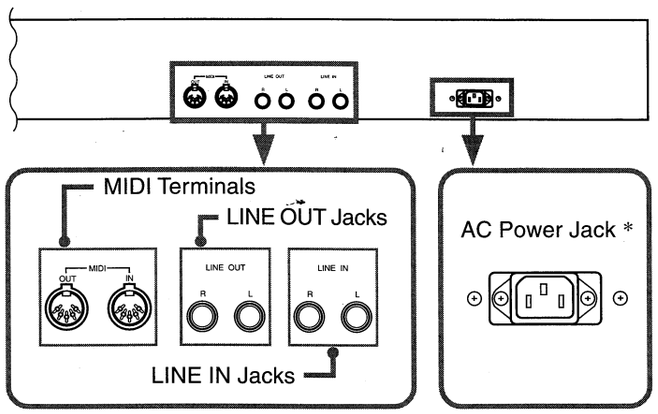
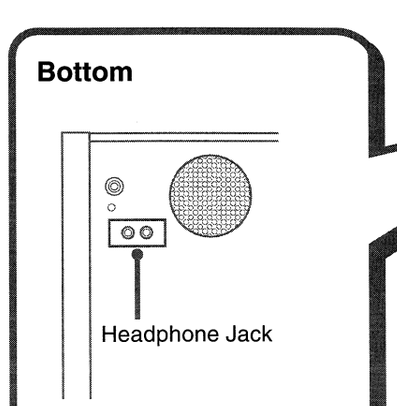
General Guide

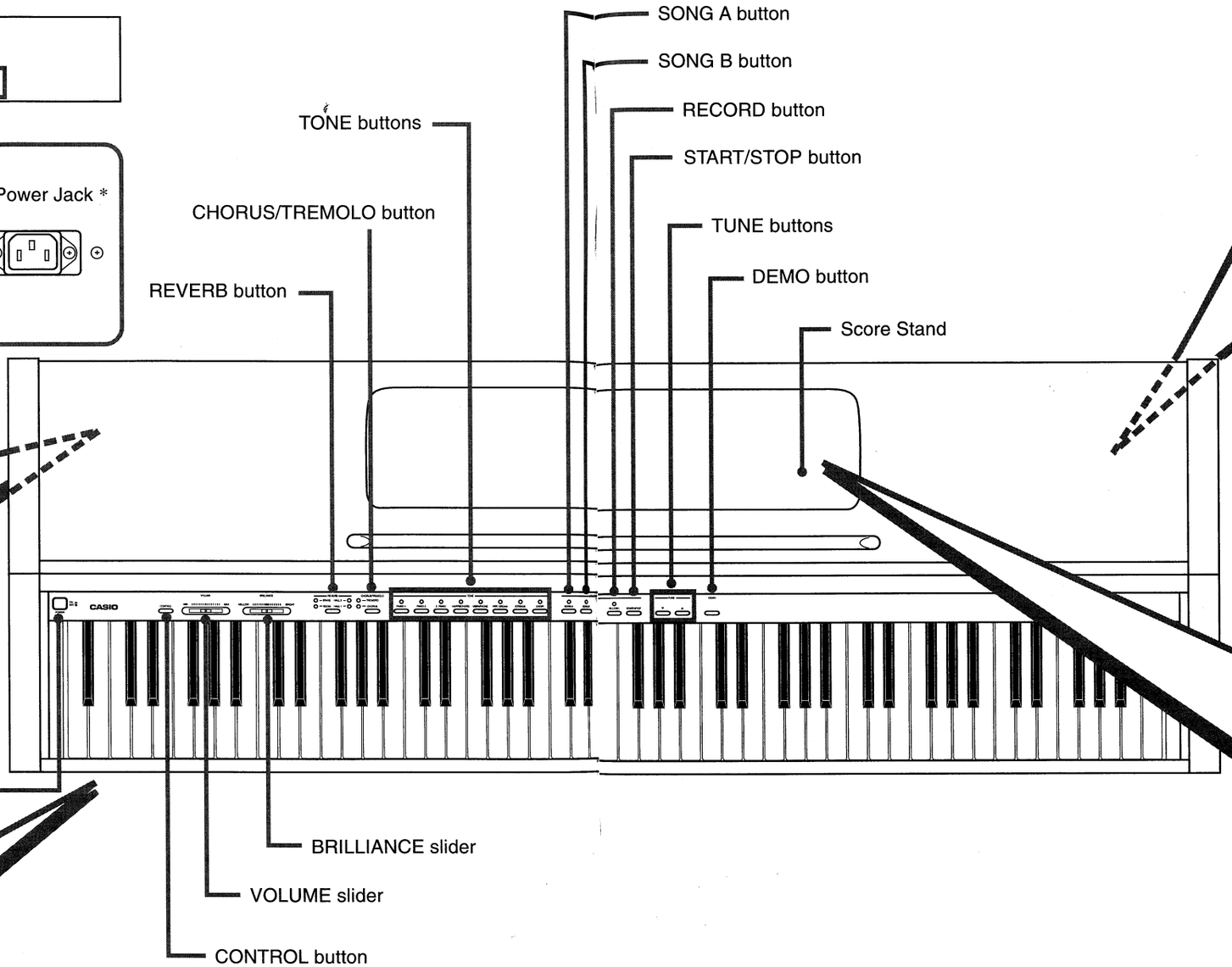
- Key, button, and other names are indicated in the text of this manual using bold type.
- See page E-33 for details on the stand.

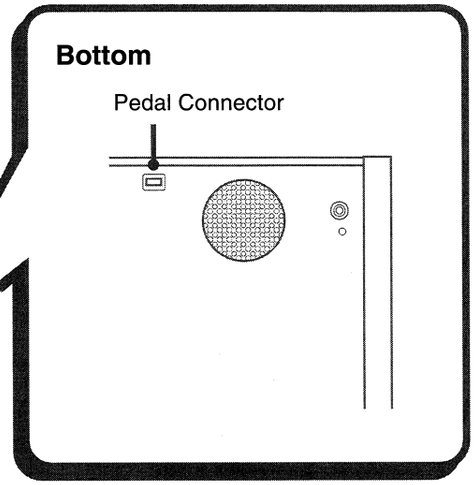
⚠ CAUTION Make sure that the cover of the piano is fully open whenever you are playing on the keyboard. A partially open cover can suddenly close unexpectedly and pinch your fingers.

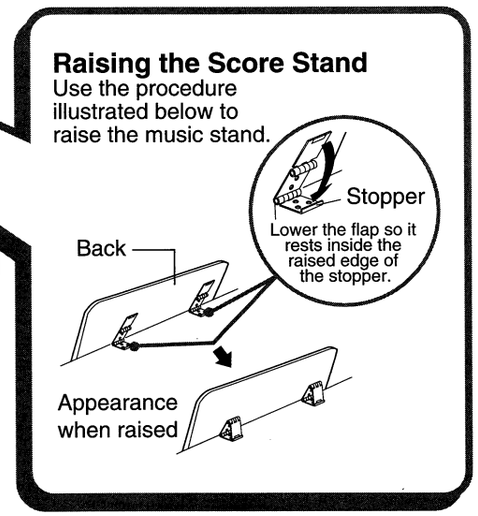
Back Panel



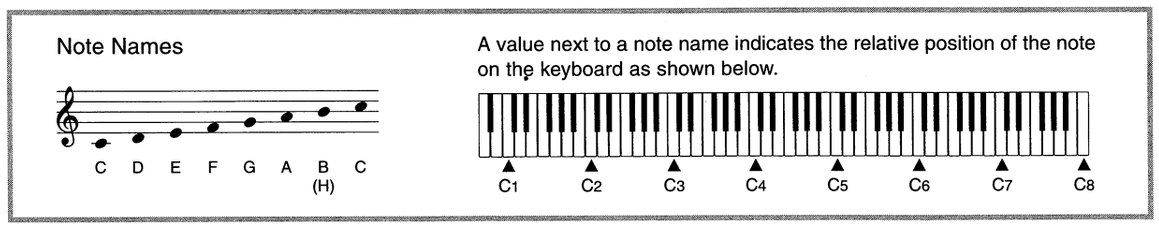







Raising the Score Stand
Use the procedure illustrated below to raise the music stand.
Stopper
Lower the flap so it rests inside the raised edge of the stopper.
Back
Appearance when raised

* With some CELVIANO models, the power cord is hard-wired to the back of the instrument.


Note Names
C D E F G A B (H) C
A value next to a note name indicates the relative position of the note on the keyboard as shown below.
C1 C2 C3 C4 C5 C6 C7 C8

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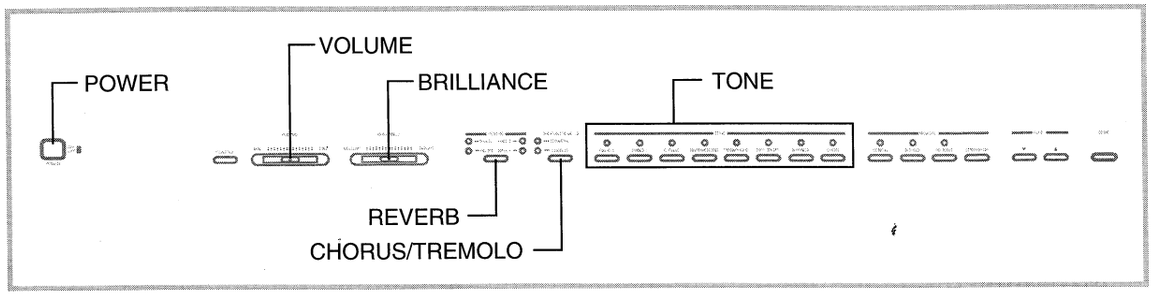
Basic Operation

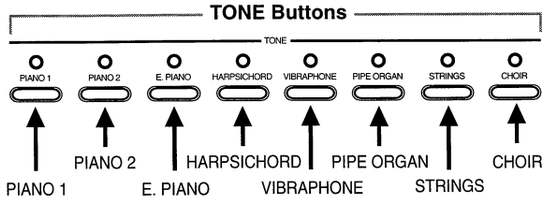


Using Tones

The following procedures describe everything you need to know about selecting and using tones.

Selecting a Tone

Your CELVIANO has a selection of 8 built-in tones.



- The eight tones that can be selected with the TONE buttons are for normal keyboard play. The PIANO 1 tone was recorded with stereo sampling.

To select a tone

1. Press the **POWER button** to turn on CELVIANO power.
2. Press one of the **TONE buttons** to select the tone you want.
3. Use the **VOLUME slider** to adjust the volume.
   - We recommend that you set the VOLUME slider one or two levels to the left of center at first.
   - Moving the slider towards MIN decreases volume, while moving it towards MAX increases volume.
4. Play something on the keyboard.
   - Adjust volume to the level you want as you play.
5. After you are finished playing, press the **POWER button** to turn off power.

NOTE

The PIANO 1 tone is selected automatically whenever you turn on CELVIANO power.

Layering Two Tones

You can assign two different tones to sound simultaneously when a key is pressed. You can also adjust the volume of the second tone to one of 15 levels.

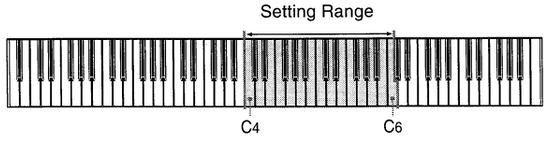
- To layer two tones, hold down the TONE button of one tone (called the "first tone") as you press the TONE button of another tone (called the "second tone").
- To unlayer two tones, simply press a single TONE button.

NOTES

- The digital effect applied to a layered set of tones is the one assigned to the first tone.
- If you change or delete a digital effect of a layered set of tones, the new setting is saved for the first tone only.

To change the volume of the second tone

- You can change the volume of the second tone at any time by holding down the TONE buttons of both tones (hold down 1st tone's button first), and then pressing one of the white keyboard keys in the range shown below to set the volume of the second tone.



C4 ..... Minimum
C6 ..... Maximum (power on default setting)

- No sound is produced when the keys are pressed.

NOTES

- You can set the volume of the second tone to one of 15 levels.
- The ratio of the first tone and second tone volumes is 1:1 (both are at maximum) when you initially layer the tones or turn on CELVIANO power.
- The second tone volume setting you make is maintained, even if you change the second tone.

Adjusting the Brilliance of a Tone

Slide the BRILLIANCE slider left and right to adjust the brilliance of a tone to the level that you want.

- Moving the slider towards MELLOW produces a more mellow sound, while moving it toward BRIGHT produces a brighter sound.

Using Digital Effects

Your CELVIANO provides you with a selection of digital effects that you can apply to tones. The following provides general descriptions of each effect, but the best way to find out how they affect tones is to experiment for yourself.

Digital Effect Types

- REVERB
  The REVERB effect gives you a choice of the four variations listed below. Each one simulates the acoustics of different environments.

  ROOM..... Small, intimate live house
  STAGE ..... Small stage
  HALL 1 .... Stage area of a large hall
  HALL 2 .... Audience area of a large hall

- CHORUS
  The CHORUS effect is most effective for the E.PIANO tone. Used in combination with one of the PIANO tones (PIANO 2 in particular), it produces a honky-tonk* piano effect.

  * A honky-tonk piano is one that is slightly off key, which produces a tinny sound.

- TREMOLO
  Best used with the VIBRAPHONE and E.PIANO tones, the TREMOLO effect is produced by causing a minute shift between the left and right speakers.

To select a digital effect

- Each press of the REVERB button cycles through the REVERB effect settings in the sequence: ROOM → STAGE → HALL 1 → HALL 2 → Off (no reverb). An indicator lights above REVERB button to show which variation is currently selected.
- Each press of the CHORUS/TREMOLO button cycles in the sequence: CHORUS → TREMOLO → Off. An indicator lights above the CHORUS/TREMOLO button to show which setting is currently selected.

Power on effect settings

The table below shows the effect settings that are assigned to each tone whenever you turn on CELVIANO power.

Tone Name	Digital Effect Setting
PIANO 1	STAGE
PIANO 2	STAGE
E.PIANO	STAGE + CHORUS
HARPSICHORD	ROOM
VIBRAPHONE	STAGE + TREMOLO
PIPE ORGAN	HALL 1
STRINGS	HALL 1 + CHORUS
CHOIR	HALL 1

- The above digital effect settings can be changed after you turn on power.

NOTES

- Selecting a tone automatically selects the digital effects currently assigned to it.
- Changes you make to digital effect settings are assigned to the currently selected tone only. Digital effect settings remain in effect until you turn off CELVIANO power.
- Demo tunes have their own digital effect settings, which are automatically selected whenever you select a demo tune.

More about tones

Polyphony

This piano can play up to 32 notes at the same time. Maximum polyphony for the PIANO 1 tone, however, is 16 notes.

Touch Response

The touch response feature of this piano causes the volume of the tones and the sound of the tones themselves to change slightly in accordance with how much pressure you apply to the keyboard, just like with an acoustic piano. Touch response affects the HARPSICHORD and PIPE ORGAN tones only slightly, because the original musical instruments normally produce the same sound, no matter how much pressure is applied.

Digitally Sampled Tones

The tones of this piano are produced using digitally recorded samples of actual musical instruments. Not all of the instruments, however, can produce tones across the entire range played by this piano (A_0 through C_8). In such a case, digital recordings are used for the range that actually can be produced by the original instrument, and synthesized tones are used for notes that cannot be produced naturally. Because of this, you may notice very slight differences between natural notes and synthesized notes in sound quality and in results produced when using effects. These differences are normal and do not indicate malfunction.

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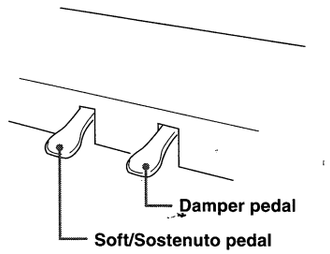
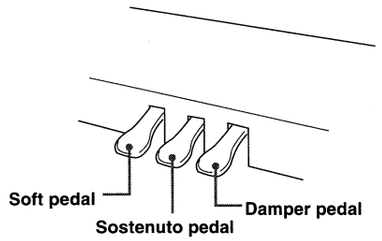
425A-E-015D

Using the Pedals

The AP-21 is equipped with the two pedals shown in the illustration below. The left pedal normally functions as a soft pedal.



The AP-23 comes equipped with the three pedals shown in the illustration below.



Pedal functions

- Damper pedal
  Pressing this pedal causes notes to reverberate and to sustain longer. In the case of the PIPE ORGAN and STRINGS tones, pressing this pedal while keyboard keys are depressed sustains the notes played until you release the pedal.

- Soft pedal
  Pressing this pedal dampens notes and slightly reduces their volume. Only notes played after the pedal is depressed are affected, and any notes played before the pedal is pressed sound at their normal volume.

- Sostenuto pedal
  Like the damper pedal, this pedal causes notes to reverberate and to sustain longer. The difference between the two pedals is the timing when they are pressed. With the sostenuto pedal, you press the pedal after depressing the notes you want to sustain. Only the notes whose keyboard keys are depressed when the sostenuto pedal is pressed are affected.

To assign the sostenuto to the left pedal (AP-21 only)

While holding down the left pedal, turn on CELVIANO power. To return left pedal to soft pedal, turn power off and then back on again.

NOTE

- The following shows how pedal effects are applied during different types of operations.

  Memory playback, demo tune play
  ..... Pedal effects applied to notes played on the keyboard only.

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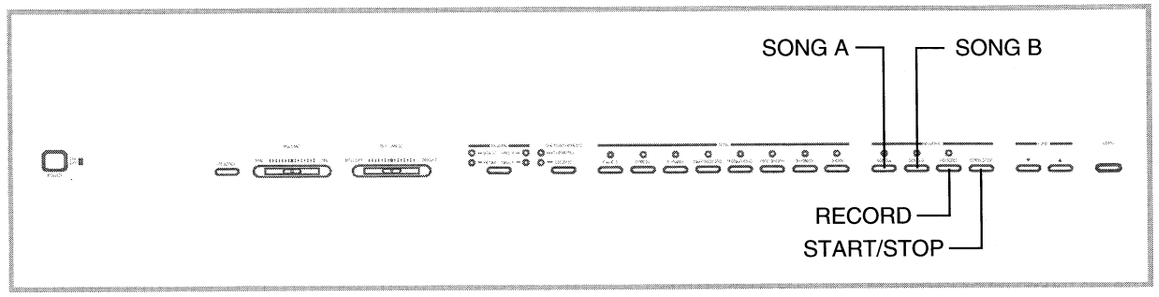
Using the Memory



This section describes how to record keyboard play to memory and playback data from memory.

About the Memory

Memory Capacity

- There are two song memory areas named SONG A and SONG B. The two song memory areas can store a combined total of approximately 3,000 notes.
- Recording stops automatically and the indicator above the RECORD button goes out whenever memory becomes full.

Recorded Data

The following is a list of the data that can be recorded in memory once recording starts.

- Anything you played on the keyboard (Received MIDI data is not recorded.)
- Tone settings (including layered tones, layered tone volume) and any tone setting changes
- Pedal operations

Recorded Data Storage

This piano has a lithium battery to supply power to retain memory contents even while power is off.* The life of the lithium battery is five years after the date of manufacture of the piano. Be sure to contact your CASIO dealer about having the lithium battery replaced every five years.

* Never turn off CELVIANO power while a record operation is in progress.

IMPORTANT!

- Recording new data to a song memory area automatically deletes any data previously stored in that song memory area.
- Turning off power while a record operation is in progress deletes anything recorded up to that point.
- CASIO shall not be held responsible for any losses by you or any third party due to loss of data caused by malfunction or repair of this piano, or by battery replacement.

Recording

To record notes from the keyboard

PREPARATION

Select the tone and effects you want to start with.

1. Press either of the **SONG buttons** to select SONG A or SONG B.
   - The indicator above the button you press lights to indicate that the song memory area is selected for recording.
   - SONG A is always selected first when you turn on CELVIANO power.

2. Press the **RECORD button** to put the piano into record standby.
   - The indicator above the RECORD button and the indicator above the button of the currently selected song area both flash.

3. Play something on the keyboard to start recording.
   - When you start recording, the indicator above the RECORD button stops flashing and remains lit.
   - What you play sounds from the speakers and is recorded into memory.
   - You can also start recording by pressing the START/STOP button. In this case, blank space is inserted in memory from the point that you press the START/STOP button up to the point you start to play on the keyboard.

4. After you are finished recording, press the **START/STOP button** to stop the record operation.
   - At this time the indicator above the RECORD button goes out, while the indicator above the recorded track remains on.
   - Here you can press the START/STOP button and playback the data you just recorded.

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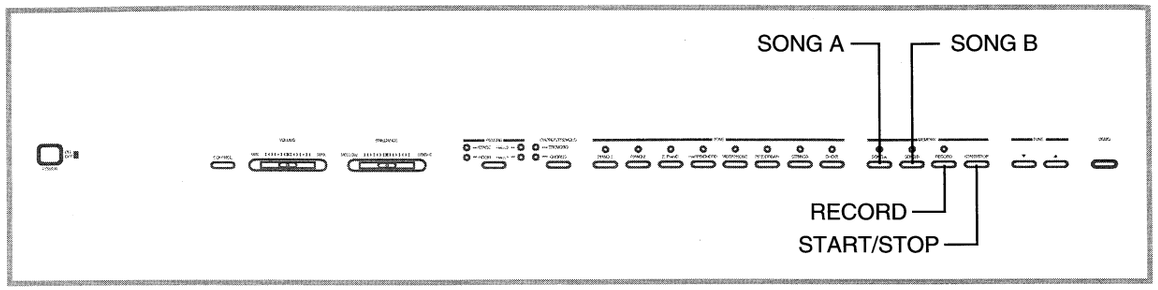


Playback

Use the following procedure to play back from memory.

To playback from memory

1. Press the **SONG button** of the song area you want to play back.
   - SONG A is always selected first when you turn on CELVIANO power.
2. Press the **START/STOP button** to start playback.
   - Playback stop automatically when the end of the tune is reached.
   - To stop part way through, press the START/STOP button.

NOTES

- If you want to playback memory contents you have just recorded, simply press the START/STOP button.
- You cannot change the tone when playing back from memory.

Deleting Memory Contents

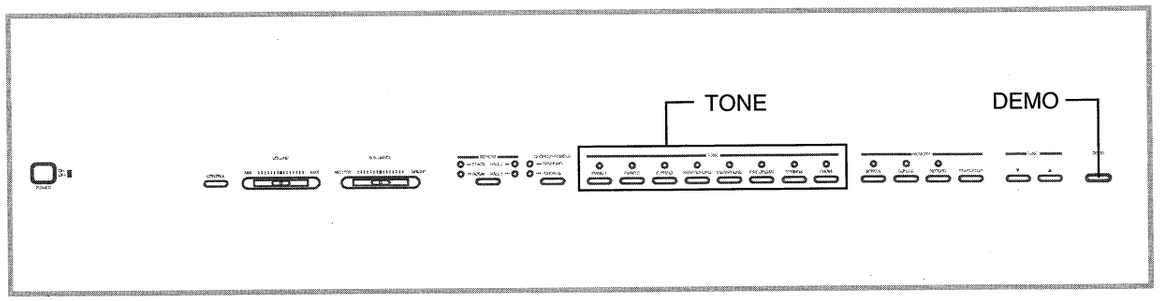
IMPORTANT!

The delete operation cannot be undone. Make sure you play back memory contents and confirm that you no longer need it before performing the following procedure.

To delete memory contents

1. Press the **SONG button** of the song area whose contents you want to delete.
   - The indicator above the button whose song area is selected for deletion lights.
   - SONG A is always selected first when you turn on CELVIANO power.
2. Press the **RECORD button** to put the piano into record standby.
3. Press the **START/STOP button** twice to delete the contents of the selected song area.

Using Demo Tunes



Your CELVIANO comes with eight built-in demo tunes, each of which features one of the eight built-in tones.

To play the demo tunes in sequence

Press the **DEMO button**.

- All the demo tunes play in sequence, starting from the Tune 1.

To play a specific demo tune

While holding the **TONE button** that corresponds to the demo tune you want to play, press the **DEMO button**.

- The tune you select continues to repeat until you stop it.

To stop demo tune play

Press the **DEMO button** to stop demo tune play.

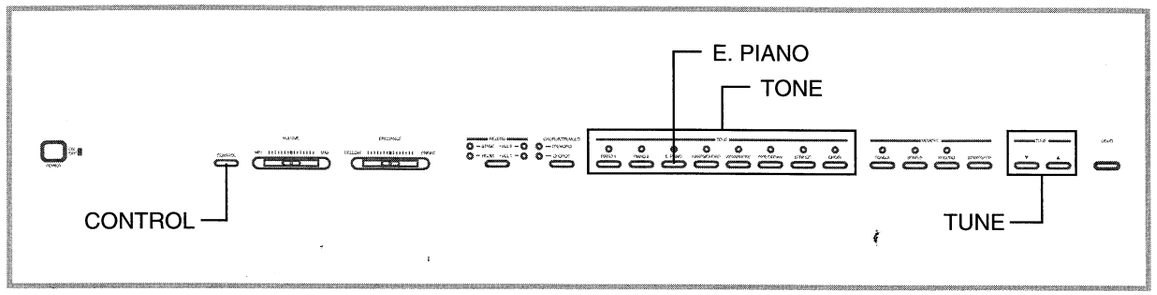
NOTES

- You cannot change the tone while a demo tune is playing.
- Playing on the keyboard during demo tune play plays notes using the demo tune's tone.
- You can adjust volume and brilliance while demo playback is in progress.
- Tone, digital effect, transpose, tuning curve, and temperament settings are changed automatically when a demo tune is played. These changes are temporary, and remain in effect only while the demo tune is playing.
- Pedal operations performed during demo tune play are applied to notes played on the keyboard only. They are not applied to demo tune playback.
- Demo tune notes cannot be sent as MIDI data.

Demo Tune List

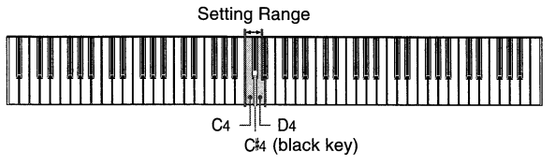
No.	Tone	Title	Composer	Effects	Time
1	PIANO 1	Polonaise "Héroïque"	F.F. Chopin	STAGE	1'35"
2	PIANO 2	Frühlingslied Op. 62-6	F. Mendelssohn	ROOM	2'09"
3	E.PIANO	CASIO Original	——	HALL 1 + CHORUS	1'36"
4	HARPSICHORD	Harmonious blacksmith	G.F. Händel	STAGE	1'15"
5	VIBRAPHONE	CASIO Original	——	STAGE + CHORUS	1'10"
6	PIPE ORGAN	Jesus, Bleibet Meine Freude	J.S. Bach	HALL 2	1'24"
7	STRINGS	CASIO Original	——	HALL 2	1'15"
8	CHOIR	CASIO Original	——	HALL 1	1'16"
Total playing time					11'50"

Keyboard Settings



Using Touch Select

This setting lets you adjust the touch of the keyboard to suit your own playing style. This means you can select a stronger touch for those with powerful hands, and a lighter touch for beginners and anyone else with less strength.
Use the keys shown below to change the Touch Select setting.



Touch Select Settings

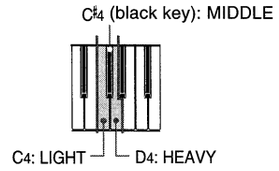
C4 ..... <LIGHT>
This setting produces strong output, even when light pressure is applied to the keyboard.

C♯4 ..... <MIDDLE>
This is the standard setting.

D4 ..... <HEAVY>
This setting requires relatively strong keyboard pressure to produce normal output.

To change the Touch Select setting

1. Hold down the **CONTROL button**. Note that you must keep the **CONTROL button** depressed until step 4, below.
   - At this time, the indicator above the PIANO 1 button should start to flash.
2. Holding down the **CONTROL button**, press the **E. PIANO button**.
   - At this time, the indicator above the E. PIANO button should start to flash.
3. While still holding down the **CONTROL button**, select the key touch by pressing one of the keyboard keys illustrated below.



   - No sound is produced when the keys are pressed.
4. Release the **CONTROL button** to exit keyboard touch setting.
   - At this time, the indicator above the E.PIANO button goes out,* and the tone button indicator that was lit before you pressed the CONTROL button re-lights.

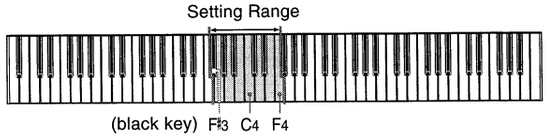
   * The E.PIANO indicator does not go out if the E.PIANO was selected before you pressed the CONTROL button.

NOTE

Touch select is automatically set to MIDDLE whenever you turn on CELVIANO power.

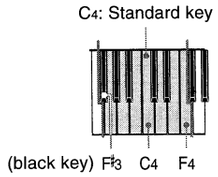
Using Transpose

Transpose lets you adjust the pitch of your CELVIANO in semitone steps. This means you can change the key of the piano to suit the voice of a vocalist or the key of another musical instrument, without having to learn to play a piece in another key.
Use the keys shown below to change the transpose setting.



To change the transpose setting

1. Hold down the **CONTROL button**. Note that you must keep the **CONTROL button** depressed until step 3, below.
   - At this time, the indicator above the PIANO 1 button should start to flash.
2. While holding down the **CONTROL button**, select a key by pressing one of the keyboard illustrated below.



   - No sound is produced when the keys are pressed.
3. Release the **CONTROL button** to exit key setting.
   - If you change the key while a note is sounding, the key does not change immediately. The new key takes effect with the next note.
   - At this time, the indicator above the PIANO 1 button goes out,* and the tone button indicator that was lit before you pressed the CONTROL button re-lights.

   * The PIANO 1 indicator does not go out if the PIANO 1 was selected before you pressed the CONTROL button.

NOTE

The transpose value is automatically set to 0 (C) whenever you turn on CELVIANO power.

Adjusting the Tuning of the Piano

You can adjust the overall tuning of the piano for play along with another instrument. You can adjust tuning within a range of ±50 cents from A4 = 440.0Hz.

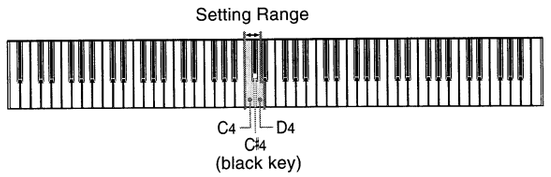
To adjust the tuning of the piano

Press the **TUNE buttons** to adjust the tuning of the piano. Each press of a button changes the setting by approx. 0.8 cent (1/128 half note).

- The tuning range is 427.0Hz to 453.0Hz. The standard tuning is A4 = 440.0Hz.
- Press both TUNE buttons at the same time to tune the piano to 440.0Hz.
  * 100 cents is equivalent to one semitone.
- If you press the TUNE button while playing on the keyboard, the new tuning goes into effect on the next note you play after making the change.

Tuning Curves

Generally, today's pianos employ a tuning method called "Equal Temperament." With pure Equal Temperament, the piano is tuned so that the interval from one key to the key next to it is always exactly the same. With actual piano tuning, however, the normal practice is to tune the low-range strings somewhat lower and the high-range strings somewhat higher, in order to enhance the acoustic effect of the piano. The "tuning curve" is a graphic representation that shows each interval on the keyboard from the low range to the high range, and how much lower and higher than Equal Temperament tuning the keyboard is tuned. In the case of a piano, for example, the tuning curve is a smooth S-curve. Tuning the tuning curve depends on the type of music you are playing and the instrument. Your CELVIANO lets you individually assign one of three different tuning curves to each tone. Use the keys shown below to change the tuning curve setting.



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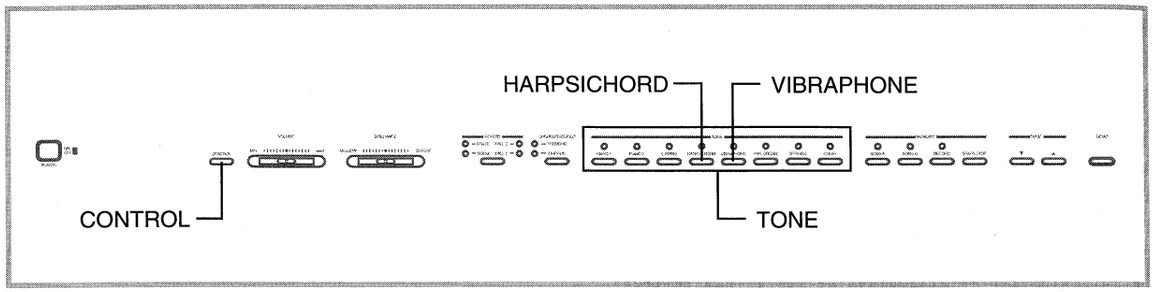


Tuning curve types

- Standard type
  With this curve, the highest key (C8) is offset by +30 cents while the lowest key (A0) is offset by approximately –30 cents.

- Electric piano type
  With this curve, the highest key is offset by +15 cents while the lowest key is offset by approximately –40 cents.

- Flat type
  With this curve, each octave is divided into 12 equal semitones.

Tuning Curve Default Settings

The table below shows the default tuning curve assigned to each tone.

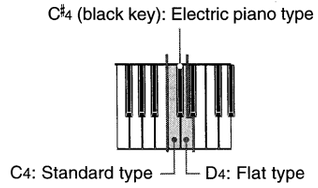
Tone Name	Default Tuning Curve
PIANO 1	Standard Type
PIANO 2	Standard Type
E.PIANO	Electric Piano Type
HARPSICHORD	Flat Type
VIBRAPHONE	Flat Type
PIPE ORGAN	Flat Type
STRINGS	Flat Type
CHOIR	Flat Type

To change the tuning curve

1. Hold down the **CONTROL button**. Note that you must keep the **CONTROL button** depressed until step 4, below.
   - At this time, the indicator above the PIANO 1 button should start to flash.

2. Holding down the **CONTROL button**, press the **VIBRAPHONE button**.
   - At this time, the indicator above the VIBRAPHONE button should start to flash.

3. While still holding down the **CONTROL button**, select the tuning curve by pressing one of the keyboard keys illustrated below.



   - No sound is produced when the keys are pressed.

4. Release the **CONTROL button** to exit tuning curve setting.
   - At this time, the indicator above the VIBRAPHONE button goes out,* and the tone button indicator that was lit before you pressed the CONTROL button relights.

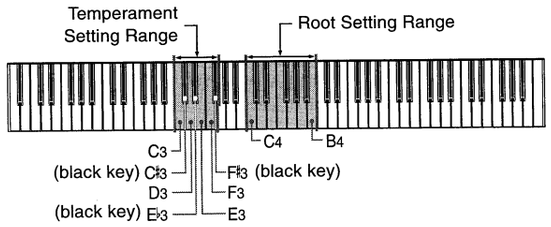
   * The VIBRAPHONE indicator does not go out if the VIBRAPHONE was selected before you pressed the CONTROL button.

NOTES

- The tuning curve settings you make are assigned individually for each tone.
- Selecting a tone automatically changes to the tuning curve assigned to that tone.
- Turning off CELVIANO power clears your tuning curve settings and restores the default settings shown in the table above.
- The tuning curve applied to a layered set of tones is the one assigned to the first tone.

Temperament

Modern pianos employ a tuning system called "Equal Temperament," which is also used by your CELVIANO. Equal Temperament, however, is a relatively new tuning system, and different temperaments were in use during the times of Bach, Beethoven, and Chopin.
Your CELVIANO comes with the seven temperament settings listed below, which adjust the tuning of the keyboard to suit a variety of classical pieces.
Use the keys shown below to change the temperament setting.



- C3 .... Equal Temperament
- C♯3 ... Kirnberger III
- D3 .... Werckmeister
- E♭3 .... Mean-Tone System
- E3 ..... Pythagorean System
- F3 ..... Just Major Intonation
- F♯3 .... Just Minor Intonation

NOTES

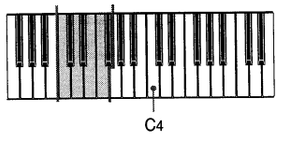
- Equal temperament and a root of C are assigned as defaults whenever you turn on CELVIANO power.
- See "About Temperaments" on page E-22 for further details.

To change the temperament

1. Hold down the **CONTROL button**. Note that you must keep the **CONTROL button** depressed until step 5, below.
   - At this time, the indicator above the PIANO 1 button should start to flash.

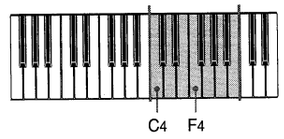
2. Holding down the **CONTROL button**, press the **HARPSICHORD button**.
   - At this time, the indicator above the HARPSICHORD button should start to flash.

3. While still holding down the **CONTROL button**, select the temperament by pressing one of the keyboard keys illustrated below.



   - No sound is produced when the keys are pressed.

4. Select a root by pressing one of the keys in the range shown in the illustration below. Remember to keep the **CONTROL button** depressed.



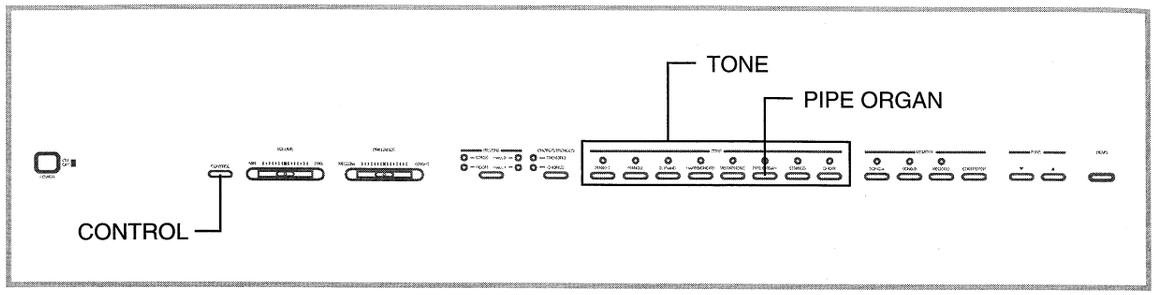
   - No sound is produced when the keys are pressed.
   - The note for the keyboard key you press is applied as the root. If you press key F4, for example, the root becomes F.
   - When Baroque Pitch (page E-22) is ON, the root is a half-note higher than the key you press. This means that to set a root of F, you should press E4.

5. Release the **CONTROL button** to exit temperament setting.
   - At this time, the indicator above the HARPSICHORD button goes out,* and the tone button indicator that was lit before you pressed the CONTROL button relights.

   * The HARPSICHORD indicator does not go out if HARPSICHORD was selected before you pressed the CONTROL button.

NOTES

- In the above operation, if you set the temperament without setting the root, the last root set is applied.
- To change the root without changing the temperament, simple skip the temperament setting steps in the above procedure. Doing so retains the last temperament you set.
- Temperament root settings are not affected when you change the Transpose setting.
- The keys you should press to set the root in step 4 of the above procedure are fixed. They are not affected by transpose settings, etc.



About Temperaments

- **Equal Temperament**
  This tuning system is the most widely used for keyboard musical instruments in the world today. The octave is divided into 12 semitones that are equal in frequency ratio. With this system, you can perform in all the major and minor keys without any adjustment. Though we take this system for granted these days, it was a revolutionary development in the history of music. Equal Temperament tuning has been the most common system used in the world since the middle of the 18th Century.

- **Kirnberger III**
  This is also one of the precursors to equal temperament. It is an evolution of just intonation and the mean-tone system, and all keys (from C-major to F♯-major) can be used for keyboard play.

- **Werckmeister**
  Werckmeister is a famous theorist who also did research on equal temperament. This particular system is said to be a precursor to equal temperament, and all keys (from C-major to F♯-major) can be used for keyboard play.

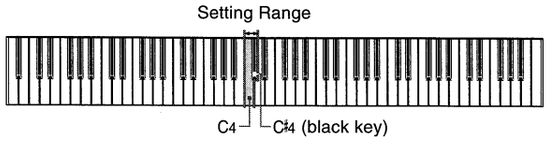
- **Mean-Tone System**
  This system was the first actually used for tuning of keyboard musical instruments. It was widely used starting from the Renaissance up until the second half of the 18th Century. During the days of Handel and Bach, it was employed for cembalos, organs, and pianos.

- **Pythagorean System**
  This system was developed by the philosopher Pythagoras sometime during the 5th Century B.C. Most of the fifths in this system do not deviate from the "pure" (acoustically correct) intervals. The Pythagorean system is perfect within a small range of tones and in the simple keys, but it becomes inadequate in others. Despite this, this system was used for Middle Age religious music, which was performed (sung) using only the simple keys.

- **Just Intonation**
  This system is one of the "pure" systems in which many of the fifths and thirds are acoustically correct. Try setting the root to C and playing C, E, G.

Using Baroque Pitch

During the Baroque Era, standard pitch was lower than the modern standard. The Baroque pitch setting of your CELVIANO lets you play Baroque era music at the pitch it was written for.
Use the keys shown below to change the Baroque pitch setting.



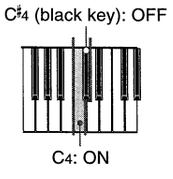
C4 ..... ON: Baroque pitch (A4 = 415.3Hz)
C♯4 ..... OFF: Modern standard (A4 = 440.0Hz)

To turn Baroque pitch off and on

1. Hold down the **CONTROL button**. Note that you must keep the **CONTROL button** depressed until step 4, below.
   - At this time, the indicator above the PIANO 1 button should start to flash.

2. Holding down the **CONTROL button**, press the **PIPE ORGAN button**.
   - At this time, the indicator above the PIPE ORGAN button should start to flash.

3. While still holding down the **CONTROL button**, switch baroque pitch on or off by pressing one of the keyboard keys illustrated below.



   - No sound is produced when the keys are pressed.

4. Release the **CONTROL button**.
   - At this time, the indicator above the PIPE ORGAN button goes out,* and the tone button indicator that was lit before you pressed the CONTROL button relights.
   * The PIPE ORGAN indicator does not go out if the PIPE ORGAN was selected before you pressed the CONTROL button.

NOTE

The Baroque pitch setting you make is retained until you change it or until you switch power off. Whenever you switch power on, the default setting is off (A4 = 440.0Hz).

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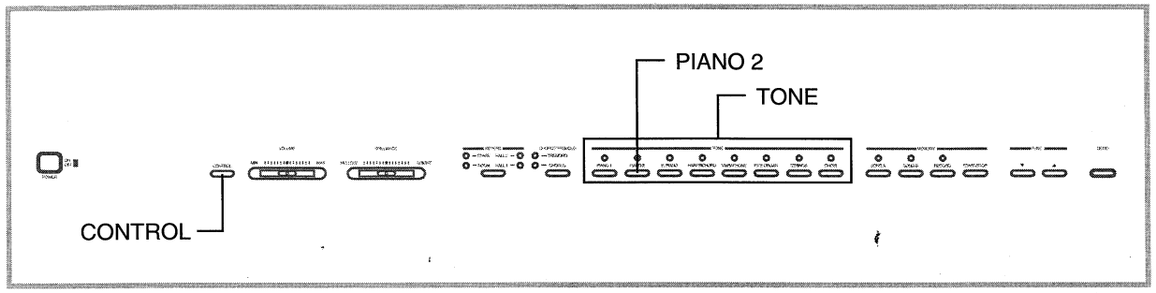
MIDI

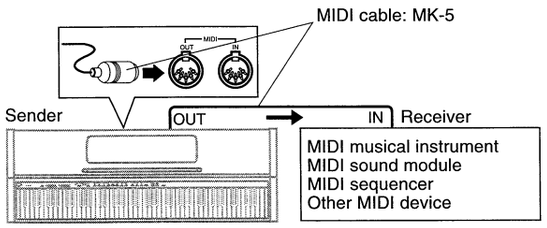


What is MIDI?

The letters MIDI stand for Musical Instrument Digital Interface, which is the name of a worldwide standard for digital signals and connectors that makes it possible to exchange musical data between musical instruments and computers (machines) produced by different manufacturers. MIDI compatible equipment can exchange keyboard key press, key release, tone change, and other data as messages.
Though you do not need any special knowledge about MIDI to use your CELVIANO as a stand-alone unit, MIDI operations require a bit of specialized knowledge. This section provides you with an overview of MIDI that will help to get you going.

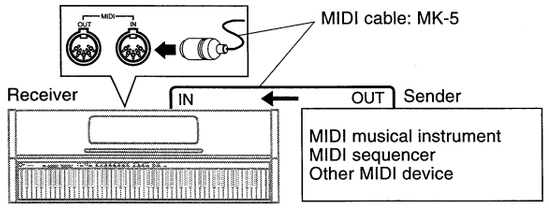
What you can do with MIDI

Send



- What you play on the CELVIANO can be sent to the connected device as MIDI messages*1. The connected device sounds notes in accordance with the messages it receives.
- MIDI messages*1 can be sent from the CELVIANO to a commercially available MIDI sequencer*2 for recording.

Receive



- The CELVIANO can be used to sound notes sent as MIDI messages from a connected device.
- Commercially available MIDI piano data can be sent from a MIDI sequencer*2 or MIDI-capable personal computer for playback on the CELVIANO. Up to 16 parts can be played simultaneously by the CELVIANO.

*1 Keyboard play and memory playback data can be sent as MIDI data. Demo tunes cannot be sent as MIDI data.
*2 A device that contains memory storage for MIDI data. Some MIDI sequencers feature external storage capabilities, which let you record a virtually unlimited number of tunes.

MIDI Connections

Two MIDI cables, one for sending and one for receiving, are required for two-way recording and playback capabilities with a connected MIDI sequencer or other device.

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MIDI Channels

MIDI allows you to send the data for multiple parts at the same time, with each part being sent over a separate MIDI channel. There are 16 MIDI channels, numbered 1 through 16, and MIDI channel data is always included whenever you exchange data (key press, pedal operation, etc.).
Both the sending machine and the receiving machine must be set to the same channel for the receiving unit to correctly receive and play data. If the receiving machine is set to Channel 2, for example, it receives only MIDI Channel 2 data, and all other channels are ignored.
Your CELVIANO is equipped with multi-timbre capabilities, which means it can receive messages over all 16 MIDI channels and play up to 16 parts at the same time.
Keyboard and pedal operations performed on your CELVIANO are sent out by selecting a MIDI channel (1 to 16) and then sending the appropriate message.

Simultaneous Receive Over Multiple Channels (Multi-Timbre)

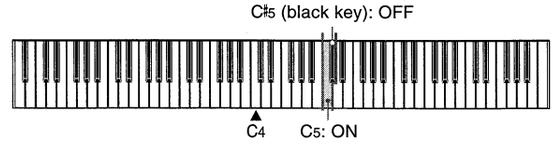
Turning on the Multi-Timbre mode makes it possible to assign the CELVIANO's built-in tones to MIDI channels 1 through 16. Then you can simultaneously sound multiple channels to play from a commercially available multi-track sequencer.

NOTES

- The Multi-Timbre mode is turned off whenever you turn on piano power. Use the procedure under "To turn the Multi-Timbre mode on and off" below to turn it on. See "Assigning Tones to Individual Channels" on page E-26 for details on assigning tones to each channel.
- Up to 16 channels can be received simultaneously (Channel 1 through channel 16).
- The number of channels to be received simultaneously must be predetermined. If it becomes necessary to cancel a channel, the cancel operation must be performed on the sending side.

To turn the Multi-Timbre mode on and off

1. Hold down the **CONTROL button**. Note that you must keep the **CONTROL button** depressed until step 4, below.
   - At this time, the indicator above the PIANO 1 button should start to flash.
2. Holding down the **CONTROL button**, press the **PIANO 2 button**.
   - At this time, the indicator above the PIANO 2 button should start to flash.
3. While still holding down the **CONTROL button**, switch the Multi-Timbre Mode on and off by pressing one of the keyboard keys illustrated below.



   - No sound is produced when the keys are pressed.
4. Release the **CONTROL button** to exit Multi-Timbre Mode setting.
   - At this time, the indicator above the PIANO 2 button goes out,* and the tone button indicator that was lit before you pressed the CONTROL button re-lights.

   * The PIANO 2 indicator does not go out if the PIANO 2 was selected before you pressed the CONTROL button.

Setting the Basic Channel

When Multi-Timbre is turned off (see section above), MIDI data is sent and received over one of the 16 available channels. This channel is called the "Basic Channel."

To set the Basic Channel

1. Hold down the **CONTROL button**. Note that you must keep the **CONTROL button** depressed until step 4, below.
   - At this time, the indicator above the PIANO 1 button should start to flash.
2. Holding down the **CONTROL button**, press the **PIANO 2 button**.
   - At this time, the indicator above the PIANO 2 button should start to flash.

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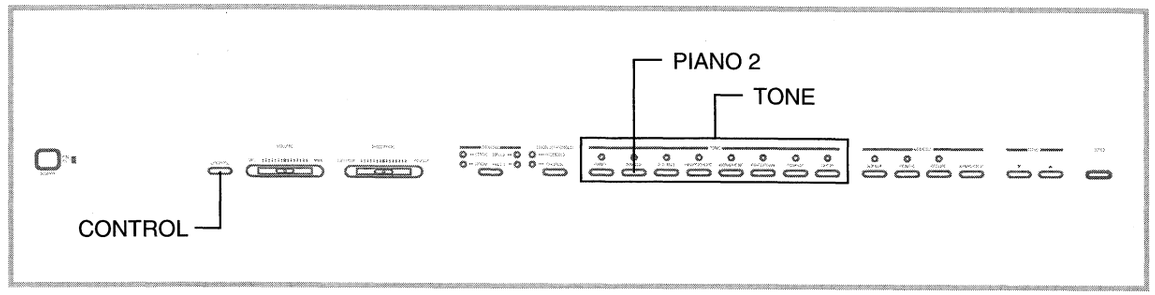
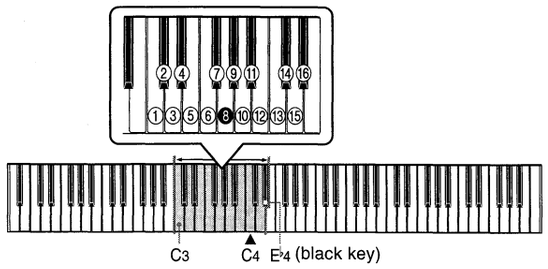


3. While still holding down the **CONTROL button**, select the basic channel by pressing one of the keyboard keys illustrated below.

Example: Channel 8



- No sound is produced when the keys are pressed.

4. Release the **CONTROL button** to exit basic channel setting.
   - At this time, the indicator above the PIANO 2 button goes out,* and the tone button indicator that was lit before you pressed the CONTROL button re-lights.

   * The PIANO 2 indicator does not go out if the PIANO 2 was selected before you pressed the CONTROL button.

NOTES

- You cannot specify a specific channel for receiving MIDI data on this piano. Instead, you should specify the send channel on the sending device.
- The Basic Channel is automatically set to 1 whenever you turn on CELVIANO power.

Assigning Tones to Individual Channels

Note that Multi-Timbre must be turned on before you can assign tones to individual channels. Perform the procedure under "To turn the Multi-Timbre mode on and off" to turn on Multi-Timbre before assigning tones to channels.

NOTE

The tone PIANO 1 is automatically assigned to all channels whenever you turn on CELVIANO power.

To assign tones to individual channels

1. Make the channel to which you want to assign a tone the Basic Channel.
   - See the procedure under "Setting the Basic Channel" for details on making a channel the Basic Channel.

2. Press the **TONE button** of the tone you want to assign to the channel.

3. Repeat steps 1 and 2 for all of the channels to which you want to assign tones.

NOTE

You can also assign tones to channels using a Program Change message sent from a connected MIDI device.

Sending Memory Playback Data

You can send memory playback as MIDI data. The send channel used depends on the Basic Channel setting, as shown in the table below.

Keyboard Play	Basic Channel
Memory (SONG A/B)	Basic Channel + 1*

* When you have Channel 16 set as the basic channel, memory playback is send over Channel 1.
* Pedal effect data recorded to the memory is applied to playback from the memory, and does not affect your performance on the keyboard. Likewise, pedal operations on the CELVIANO are applied to the keyboard only, and not to playback from the memory.

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Setting the Program Change Number Type

The tones of your CELVIANO are assigned the Type 1 program numbers and General MIDI System (see "General MIDI") compliant Type 2 program numbers shown in the table below.

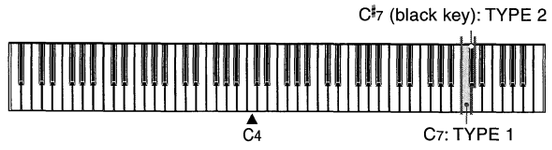
Tone Name	Type 1		Type 2	
	Send	Receive	Send	Receive
PIANO 1	0	0	0	0, 2, 3
PIANO 2	1	1	1	1
E.PIANO	2	2	4	4, 5
HARPSICHORD	3	3	6	6
VIBRAPHONE	4	4	11	11 - 13
PIPE ORGAN	5	5	19	16 - 20
STRINGS	6	6	48	48 - 51
CHOIR	7	7	52	52 - 54

To change the program change number type

1. Hold down the **CONTROL button**. Note that you must keep the **CONTROL button** depressed until step 4, below.
   - At this time, the indicator above the PIANO 1 button should start to flash.

2. Holding down the **CONTROL button**, press the **PIANO 2 button**.
   - At this time, the indicator above the PIANO 2 button should start to flash.

3. While still holding down the **CONTROL button**, select the Program Change Mode by pressing one of the keyboard keys illustrated below.



- No sound is produced when the keys are pressed.

4. Release the **CONTROL button** to exit Program Change Mode setting.
   - At this time, the indicator above the PIANO 2 button goes out,* and the tone button indicator that was lit before you pressed the CONTROL button re-lights.

   * The PIANO 2 indicator does not go out if the PIANO 2 was selected before you pressed the CONTROL button.

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General MIDI

The General MIDI System is a set of specifications for sound generating devices agreed upon by world MIDI manufacturers. These specifications were developed to allow the creation of music data that is not limited to specific equipment makers and models. Among other things, General MIDI defines the tone number sequence and the number of MIDI channels that can be used. Any device equipped with a sound source that supports General MIDI is able to produce sounds of similar nuances, regardless of the manufacturer or model.

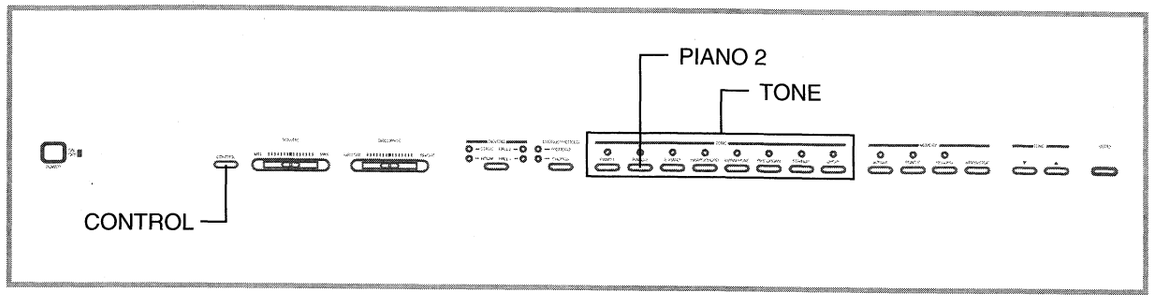
The Type 2 program change numbers of your CELVIANO assign program numbers to tones so they comply with the General MIDI System. Type 2 program change numbers provide the following capabilities.

(1) You can send from the CELVIANO's memory for play on a connected General MIDI System compatible device.
(2) When the Multi-Timber mode is turned on, you can received General MIDI System data from a connected sequencer or other device for play using the CELVIANO's tones.

In the case of (2), tone switching is performed only when a program number that corresponds to any of the CELVIANO's eight non-bass tones is received. No tone switching is performed when any other program number is received.

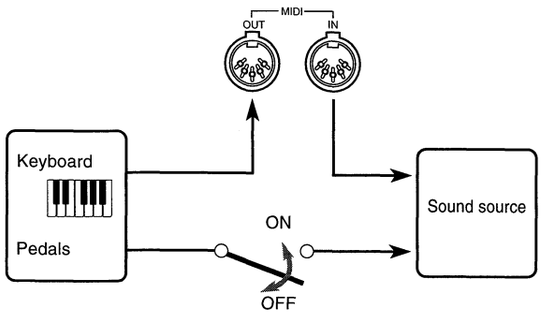
The following table shows the relationship between CELVIANO tones and General MIDI sounds.

CELVIANO Tone	Send	Receive	Corresponding General MIDI Sound
PIANO 1	0	0	Acoustic Grand Piano
		2	Electric Grand Piano
		3	Honky-tonk Piano
PIANO 2	1	1	Bright Acoustic Piano
E.PIANO	4	4	Electric Piano 1
		5	Electric Piano 2
HARPSICHORD	6	6	Harpsichord
VIBRAPHONE	11	11	Vibraphone
		12	Marimba
		13	Xylophone
PIPE ORGAN	19	16	Drawbar Organ
		17	Percussive Organ
		18	Rock Organ
		19	Church Organ
		20	Reed Organ
STRINGS	48	48	String Ensemble 1
		49	String Ensemble 2
		50	SynthStrings 1
		51	SynthStrings 2
CHOIR	52	52	Choir Aahs
		53	Voice Oohs
		54	Synth-Voice



Turning Local Control On and Off

This setting effectively determines whether or not the keyboard and pedals of the CELVIANO are connected to the CELVIANO's sound source, as illustrated below.



Local Control

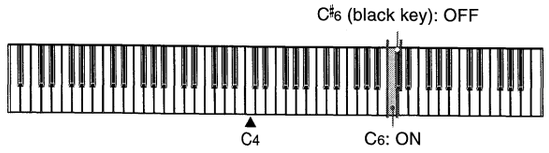
When Local Control is on (the normal setting), anything played on the keyboard is sounded by the internal sound source and simultaneously output from the MIDI OUT terminal. When off, anything played on the keyboard is output from the MIDI OUT terminal only, without being sounded by the sound source.
Local Control can be turned off when you are using the CELVIANO as the sound source of a connected sequencer or other device, and you want to guard against sound being produced should the CELVIANO keyboard be pressed accidentally.

To turn Local Control on and off

1. Hold down the **CONTROL button**. Note that you must keep the **CONTROL button** depressed until step 4, below.
   - At this time, the indicator above the PIANO 1 button should start to flash.

2. Holding down the **CONTROL button**, press the **PIANO 2 button**.
   - At this time, the indicator above the PIANO 2 button should start to flash.

3. While still holding down the **CONTROL button**, switch Local Control on and off by pressing one of the keyboard keys illustrated below.



   - No sound is produced when the keys are pressed.

4. Release the **CONTROL button** to exit Local Control setting.
   - At this time, the indicator above the PIANO 2 button goes out,* and the tone button indicator that was lit before you pressed the CONTROL button re-lights.
   * The PIANO 2 indicator does not go out if the PIANO 2 was selected before you pressed the CONTROL button.

NOTES

- Note that no sound will be produced from the CELVIANO's speakers if you press the keyboard while Local Control is turned off.
- Local Control is turned on automatically whenever you turn on CELVIANO power or play a demo tune.

MIDI Data Notes

This section provides details about the MIDI data your CELVIANO sends and receives. You can also find further technical information in the MIDI Implementation Chart* at the end of this User's Guide.

* The MIDI Implementation Chart is a standard format summary of how data is transferred between your CELVIANO and a connected MIDI device.

Keyboard Data (Note On, Note Off, Note Number, Velocity)

The following four types of keyboard data can be sent and received.

Data	Meaning
Note On	Keyboard key is pressed.
Note Off	Keyboard key is released.
Note Number	Which key is pressed.
Velocity	Pressure applied

- Note Off is sent as Velocity = 0.
- Receipt of a note that is outside the 88-key range of the CELVIANO keyboard is played using the same note in the nearest octave within the CELVIANO keyboard range.

Tone Change Data (Program Change)

Whenever you change the tone on the CELVIANO, tone change data (Program Change) is also sent out as MIDI data. Conversely, receipt of a Program Change from a connected MIDI device causes the CELVIANO to change to the applicable tone. The following table shows Program Change numbers that are assigned to each of the CELVIANO's tone.

Tone Name	Type 1		Type 2	
	Send	Receive	Send	Receive
PIANO 1	0	0	0	0, 2, 3
PIANO 2	1	1	1	1
E.PIANO	2	2	4	4, 5
HARPSICHORD	3	3	6	6
VIBRAPHONE	4	4	11	11 - 13
PIPE ORGAN	5	5	19	16 - 20
STRINGS	6	6	48	48 - 51
CHOIR	7	7	52	52 - 54

- As can be seen in the above table, there are two types of program numbers (Type 1 and Type 2), either of which can be selected by you. For details on how to select a program number type and what each type is, see "Setting the Program Change Number Type" on page E-27.

Pedal and Effect Operation Data (Control Change)

Control Change is used to send and receive data about damper, soft, and sostenuto pedal* depress and release, as well as data about digital effects. Send and receive conditions are shown in the table below.

* **AP-21 Users**
The AP-21 is equipped with only two pedals. The left-hand pedal can be switched between soft and sostenuto. The pedal effect applied by MIDI data depends on whether data is being sent or received.
Send: Pressing the left pedal sends data that corresponds to the current pedal effect setting (soft or sostenuto).
Receive: Pedal effect is applied in accordance with the data received.

Operation	Control Change Number	Send Data	Receive Data
Damper Pedal	64	0: OFF, 127: ON	0 to 127 (0: OFF)
Soft Pedal	67	0: OFF, 127: ON	0 to 63: OFF, 64 to 127: ON
Sostenuto Pedal	66	0: OFF, 127: ON	0 to 63: OFF, 64 to 127: ON
Reverb	91	0: OFF 32: ROOM 64: STAGE 96: HALL1 127: HALL2	0: OFF 1 to 32: ROOM 33 to 64: STAGE 65 to 96: HALL1 97 to 127: HALL2
Tremolo	92	127: ON 0: OFF	64 to 127: ON 0 to 63: OFF
Chorus	93	127: ON 0: OFF	64 to 127: ON 0 to 63: OFF

Tone Layer Setting Data (System Exclusive Message Send and Receive)

CELVIANO tone layer setting data is sent and received as System Exclusive Messages using a hexadecimal number in the format shown below.

[F0] [44] [06] [00] [7n] [00] [03] - [**] [nn] [mm] - [F7]

[03][nn][mm] Layer On	[nn] : Program Change	Number corresponding to layer tone Program Change number (Program Change number Type 2)
	[mm] : Layer Volume	[00] to [0E] : Corresponds to layer tone volume.
[04][xx][xx] Layer Off	[xx] :Ignored (Sent as [00])	

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Troubleshooting

Symptom	Possible Cause	Action	Reference
No sound produced when keyboard keys are pressed.	1. VOLUME slider set to MIN. 2. Headphones connected to the piano. 3. Local Control turned off.	1. Move VOLUME slider more towards the MAX side. 2. Disconnect the headphones from the piano. 3. Turn on Local control.	Page E-12 Page E-32 Page E-28
Keyboard out of tune.	1. Transpose is set to a value other than 0. 2. Incorrect tuning setting 3. Baroque pitch is turned on.	1. Change the transpose setting to 0, or turn CELVIANO power off and then back on again. 2. Correct the tuning setting, or turn CELVIANO power off and then back on again. 3. Turn off baroque pitch or turn power off and then back on again.	Page E-19 Page E-19 Page E-22
Pedal effect continues to be applied even though pedals are not pressed.	Problem with the connection between the pedals and piano.	Turn off CELVIANO power and then check to make sure that the pedal plug is securely connected to the piano's pedal connector.	Page E-35
No sound produced by demo tune play.	1. VOLUME slider set to MIN. 2. Headphones connected to the piano.	1. Move VOLUME slider more towards the MAX side. 2. Disconnect the headphones from the piano.	Page E-12 Page E-32
Memory contents deleted.	Lithium battery is dead.	Contact your CASIO Service Provider for replacement of the lithium battery.	Page E-7
Chords or scales sound strange.	1. Wrong tuning curve type 2. Wrong temperament	1. Return the tuning curve back to the initial setting for the tone you are using, or turn power off and then back on again. 2. Return the temperament setting to equal temperament, or turn power off and then back on again.	Page E-19 Page E-21
No sound produced by connected external MIDI sound source when CELVIANO keys are pressed.	1. CELVIANO Basic Channel does not match the Basic Channel of the MIDI sound source. 2. Volume or expression setting of the external sound source is set to 0.	1. Change the Basic Channel settings so they are identical. 2. Change the volume or expression setting of the external sound source to an appropriate value.	Page E-25 See the documentation that comes with the external sound source.

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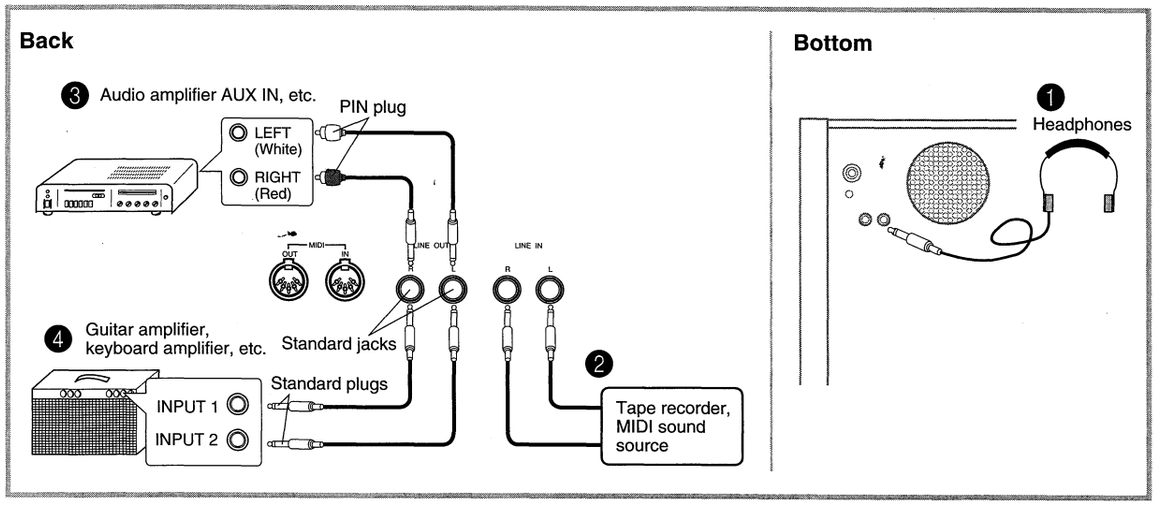
Connections

Connecting to an audio or musical instrument amplifier lets you produce even clearer, more powerful sound through external speakers.



IMPORTANT!

- Whenever connecting external equipment, first set the VOLUME slider of the CELVIANO and the volume controller of the external equipment to relatively low volume settings. You can later adjust volume to the level you want after connections are complete.
- Be sure also to refer to the documentation that comes with the equipment you are connecting to for its proper connection procedures.

Connecting Headphones 1

Connect commercially available headphones to the CELVIANO's headphones jack. This cuts off the built-in speakers, which means you can practice even late at night without disturbing others. To protect your hearing, make sure that you do not set the volume level too high when using headphones.

Playing External Equipment From Your CELVIANO 2

Use commercially available cords to connect the CELVIANO's LINE IN jacks to the LINE OUT jacks of the external equipment. (MIDI sound source, Tape recorder, etc.) It is up to you to purchase connecting cables that are compatible with the equipment you are connecting.

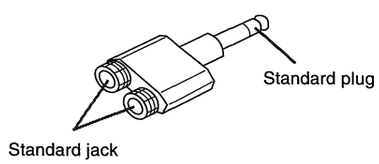
Connecting to Audio Equipment 3

Use commercially available cords to connect to the two jacks as shown in Figure 3. It is up to you to purchase connecting cables like the ones shown in the illustration for connection. Normally in this configuration, you must set the audio equipment's input selector to the setting that specifies the terminal (such as AUX IN) that the CELVIANO is connected to. Use the CELVIANO's VOLUME slider to adjust the volume level.

Connecting to a Musical Instrument Amplifier 4

Use commercially available cords to connect to the two jacks as shown in Figure 4. It is up to you to purchase connecting cables like the ones shown in the illustration for connection. Use the CELVIANO's VOLUME slider to adjust the volume level.

* If your amplifier has only one input jack, use an adapter like the one shown below.



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Assembly Instructions

- Illustrations in this User's Guide shows the AP-21.

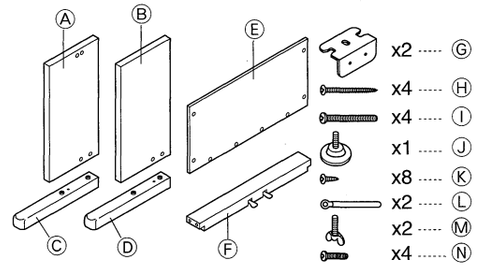
⚠ Caution

- Take particular care to avoid injury when installing legs and pedals, and when mounting the keyboard onto the stand.
- When assembling, make sure that the sliding keyboard cover of the piano body is completely closed. If the cover is left open during assembly, it may close suddenly causing the fingers to be pinched between the piano body and cover.

IMPORTANT!

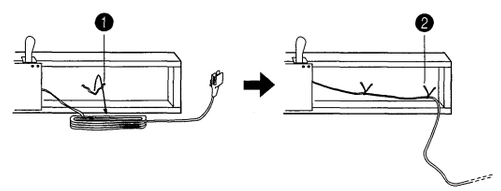
- Be sure to assemble the stand on a flat surface.
- This stand does not include any of the tools required to assemble it. You should have a large Phillips head (+) screwdriver on hand for assembly.

Figure 1



- Check the items that come with the unit to make sure that everything shown in Figure 1 (Ⓐ through Ⓝ) is included. All screws are in a plastic bag inside of the packing cardboard.

Figure 2

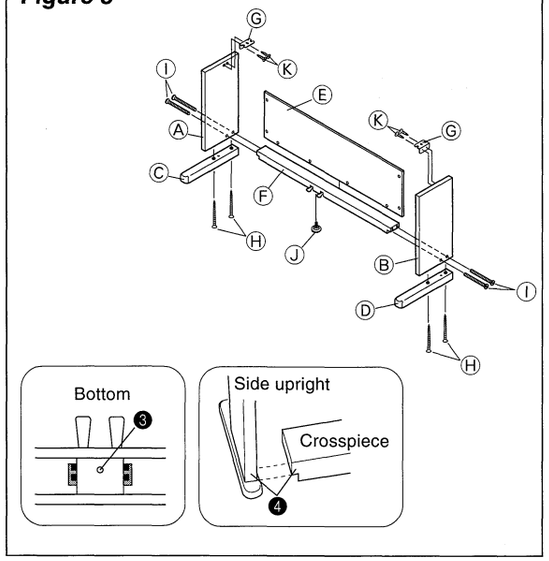


- Before starting actual assembly of the stand, undo the clip at location 1 (Figure 2) where the pedal cable comes out the back of crosspiece Ⓕ. Pull out the coiled cable and refasten two clips at points 1 and 2 as shown in the illustration.

1 Assembling the stand

Refer to Figures 3, 4 and 5 as you assemble the stand according to the following procedure.

Figure 3



1. Attach side upright Ⓐ to footpiece Ⓒ, and side upright Ⓑ to footpiece Ⓓ using the Ⓗ screws. Also install the two angle brackets Ⓖ onto side uprights Ⓐ and Ⓑ using the Ⓚ screws. (Figure 3).
2. Install height adjustment screw Ⓙ into hole 3 located in the center of the back of crosspiece Ⓕ (Figure 3).
3. Attach side uprights Ⓐ and Ⓑ to crosspiece Ⓕ using the four Ⓘ screws (Figure 3).
   - Make sure that crosspiece Ⓕ is correctly positioned as indicated by 4 in the inset of Figure 3. It should be perpendicular (at a 90-degree angle) to the two side uprights. Also make sure that uprights Ⓐ and Ⓑ are parallel with each other. If the pieces are not positioned correctly, the nuts built into crosspiece Ⓕ will not seat properly with the Ⓘ screws. This can result in stripping of the threads and free turning of nuts.

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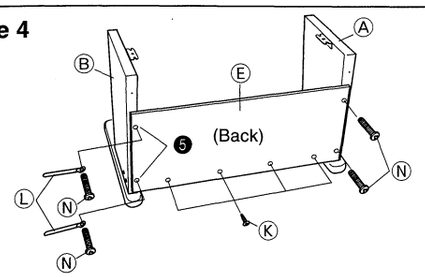
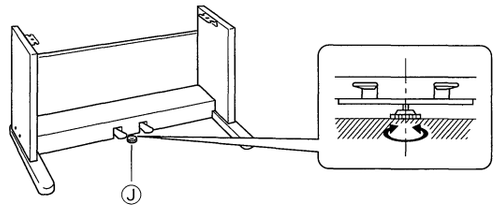
Figure 4



4. Install back panel Ⓔ onto the assembly made up of side uprights Ⓐ and Ⓑ, and crosspiece Ⓕ. Secure it in place with four Ⓚ screws and four Ⓝ screws. Also install the two Ⓛ clips and four Ⓝ screws (Figure 4).
   - Make sure that the rough surface of back panel Ⓔ is facing towards the back of the stand.
   - Start with the four Ⓝ screws on the left and right, and then install the other four Ⓚ screws. When installing the two screws marked ❺ in Figure 4, pass the screws through the holes in the Ⓛ clips and then screw the screws into place on the stand.

Figure 5



5. Rotate height adjustment screw Ⓙ until it supports crosspiece Ⓕ, preventing the crosspiece from bending when you press the pedals (Figure 5).

IMPORTANT!

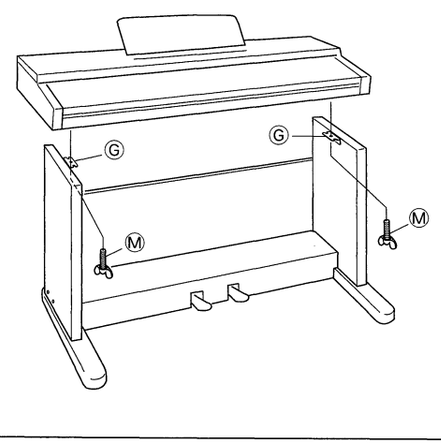
- Be sure to install adjustment screw Ⓙ and perform the adjustment procedure described above before depressing the pedals. Failure to do so can result in damage to crosspiece Ⓕ.

2 Installing the Keyboard onto the Stand

⚠ Caution

Take care that you do not pinch your fingers between the keyboard and stand!

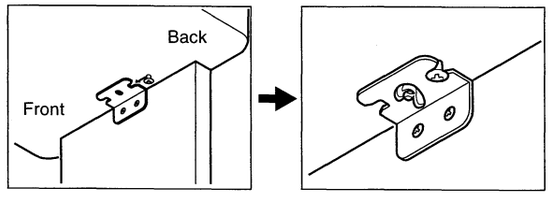
Figure 6



Be sure that you securely anchor the keyboard to the stand using the Ⓜ butterfly bolts (Figure 6).

- Slide the screws on the bottom of the keyboard into the slots in the two angle brackets Ⓖ. Next, secure the keyboard to the stand with two butterfly bolts Ⓜ.

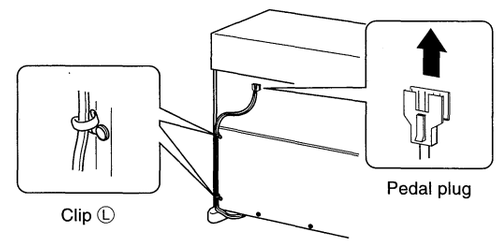
Figure 7



- The butterfly bolts keep the keyboard from falling from the stand. Be sure that you always secure the keyboard with the butterfly bolts.

3 Connecting the Pedal

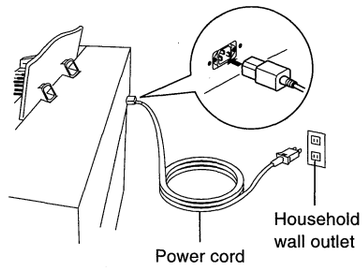
Figure 8



Position the pedal plug as shown in Figure 8 and insert it into the pedal connector on the bottom of the piano. Secure the pedal cable to the upright of the stand using the Ⓛ clips that you installed when assembling the stand.

4 Connecting to a Power Supply

Figure 9



1. Check to make sure that the piano's POWER button is in the OFF position. If it is ON, press the button to switch it OFF.
2. Attach the power cord that comes with the piano to the back of the piano.
3. Plug the piano's power cord into a wall outlet (Figure 9).

IMPORTANT!

- The shapes of the piano's power cord and wall outlet should be different according to countries or regions. The illustrations are examples.
- With some CELVIANO models, the power cord is hard-wired to the back of the instrument.

⚠ Caution

The screws that you use to assemble the stand may become loose after a long period due to changes in temperature and humidity, or vibration caused by normal use, etc. Periodically check the screws used to fasten the stand and the butterfly bolts used to fasten the stand and the piano, and tighten them whenever necessary.

425A-E-036B

425A-E-037A

Specifications

All of the items in these specifications apply to the AP-21, AP-21V, AP-23, and AP-23V, unless specifically noted otherwise.

Models:	AP-21/AP-21V/AP-23/AP-23V
Keyboard:	88 piano keys (with touch response)
Polyphony:	32 notes, maximum
Tones:	• 8 • Tuning Curves: 3 types • Layer: Adjustable volume
Digital Effects:	Reverb (4 types), Chorus, Tremolo, Brilliance
Demo Tunes:	• Number of Tunes: 8 • Playback: Repeat (all tunes, one tune)
Memory:	• Operations: Real-time recording, playback • Number of Songs: 2 (SONG A, SONG B) • Capacity: Approximately 3,000 notes (total of 2 songs) • Memory Backup: Built-in lithium battery (Battery Life: 5 years)
Pedals:	AP-21/AP-21V: Damper, Soft/Sostenuto (Selectable) AP-23/AP-23V: Damper, Soft, Sostenuto
Other Functions:	• Touch Select: 3 types • Transpose: 1 octave (F♯ to C to F) • Tuning: A4 = 440Hz ±50 cents (adjustable) • Temperament: 7 types • Baroque pitch
MIDI:	16 multi-timbre receive
Input/Output:	• Headphones: Stereo standard jacks × 2 • LINE OUT (R)(L): Monaural standard jacks × 2 Output impedance: 22 KΩ Output voltage: 2.0 V (RMS) MAX • LINE IN (R)(L): Monaural standard jacks × 2 Input impedance: 30 KΩ Input voltage: 200 mV • MIDI (OUT) (IN)
Speakers:	∅ 16cm × 2 (Output: 20 W + 20 W)
Power Supply:	AP-21/AP-23: 120V AP-21V/AP-23V: 220-240V
Power Consumption:	AP-21/AP-23: 48W AP-21V/AP-23V: 62W
Dimensions:	• CELVIANO (without stand): 137.0 × 47.0 × 19.8 cm (54 × 18 $^{1}/_{2}$ × 7 $^{3}/_{4}$ inch) • CELVIANO: 138.1 × 47.0 × 82.9 cm (54 $^{7}/_{16}$ × 18 $^{1}/_{2}$ × 32 $^{11}/_{16}$ inch)
Weight:	• CELVIANO (without stand): approximately 36.4 kg (80.3 lbs) • CELVIANO: approximately 45.5 kg (100.3 lbs) (AP-21/AP-21V) approximately 46.0 kg (101.5 lbs) (AP-23/AP-23V)

- *Design and specifications are subject to change without notice.*
- *AP-21 and AP-23 have hardwired power cords.*
- *AP-21V and AP-23V have detachable power cords.*

425A-E-038D

Introducción

Muchas gracias por haber elegido el Piano Digital de CASIO. Este piano es un instrumento musical sofisticado que combina lo mejor de la calidad de sonido y tacto del piano tradicional, con lo que ofrece actualmente la tecnología electrónica más avanzada.
Antes de usar el instrumento, asegúrese de leer detalladamente las instrucciones contenidas en este manual.

Guarde toda información para referencia futura.

CE
CASIO ELECTRONICS CO., LTD.
Unit 6, 1000
North Circular Road
London NW2 7JD, U.K.

Esta marca se aplica solamente al modelo AP-21V/AP-23V.
Guarde toda información para usar como referencia futura.

425A-E-039D

Especificaciones

Todos los ítemes en estas especificaciones se aplican a los modelos AP-21, AP-21V, AP-23 y AP-23V a menos que se indique específicamente de otra manera.

Modelo:	AP-21/AP-21V/AP-23/AP-23V
Teclado:	88 teclas de piano (con respuesta al toque)
Polifonía:	Máximo de 32 notas
Sonidos:	• 8 • Curvas de afinación: 3 tipos • Estratificador: Volumen ajustable
Efectos digitales:	Reverberación (4 tipos), coro, trémolo, dinámica
Melodías de demostración:	• Número de melodías: 8 • Reproducción: Repetición (todas las melodías, una melodía)
Memoria:	• Operaciones: Grabación en tiempo real, reproducción • Número de canciones: 2 (SONG A, SONG B) • Capacidad: Aproximadamente 3.000 notas (total de 2 canciones) • Conservación de memoria: Pila de litio incorporada (Duración de pila: 5 años)
Pedales:	AP-21/AP-21V: Sordina, suave/sostenuto (seleccionable) AP-23/AP-23V: Sordina, suave, sostenuto
Otras funciones:	• Selección de toque: 3 tipos • Transposición: 1 octava (F♯ a C a F) • Afinación: A4 = 440,0Hz ±50 centésimas (ajustable) • Temperamento: 7 tipos • Altura tonal barroca
MIDI:	Recepción de 16 canales multitimbres
Entrada/Salida:	• Auriculares: 2 tomas estéreos estándar • LINE OUT (R)(L): 2 tomas monofónicas estándar Impedancia de salida: 22kΩ Voltaje de salida: 2,0V (eficaz) máx. • LINE IN (R)(L): 2 tomas monofónicas estándar Impedancia de entrada: 30kΩ Voltaje de entrada: 200mV • MIDI (OUT) (IN)
Altavoces:	∅ 16cm × 2 (Salida: 20W + 20W)
Fuente de alimentación:	AP-21/AP-23: 120 V AP-21V/AP-23V: 220-240 V
Consumo de energía:	AP-21/AP-23: 48W AP-21V/AP-23V: 62W
Dimensiones:	• CELVIANO (sin soporte): 137,0 × 47,0 × 19,8 cm • CELVIANO : 138,1 × 47,0 × 82,9 cm
Peso:	• CELVIANO (sin soporte): Aproximadamente 36,4kg • CELVIANO : Aproximadamente 45,5kg (AP-21/AP-21V) Aproximadamente 46,0kg (AP-23/AP-23V)

- *El diseño y las especificaciones están sujetos a cambios sin previo.*
- *Los modelos AP-21 y AP-23 tienen cables de alimentación con conexión fija.*
- *Los modelos AP-21V y AP-23V tienen cables de alimentación desconectables.*

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Appendix/Apéndice

Initial Power On Settings

The table below shows the initial settings of the CELVIANO whenever power is turned on.

Item	Setting
Tone	PIANO 1
Reverb	STAGE (PIANO 1)
Chorus/Tremolo	Off (PIANO 1)
Layer	Off (Layer Volume: Maximum)
Playback Song	SONG A
Touch Select	MIDDLE
Transpose	C

Item	Setting
Tuning	A4 = 440.0Hz
Tuning Curves	Standard Type (PIANO 1)
Temperament	Equal Temperament, Root C
Baroque Pitch	Off
Basic Channel	Channel 1
Multi-Timbre Mode	Off
Local Control	On
Program Change Mode	Type 1

Ajustes iniciales al activarse la alimentación

La tabla siguiente muestra los ajustes iniciales del CELVIANO siempre que se activa la alimentación.

Item	Ajuste
Sonido	PIANO 1
Reverberación	STAGE (PIANO 1)
Coro/Trémolo	Desactivado (PIANO 1)
Estratificador	Desactivado (Volumen del estratificador: Máximo)
Canción de reproducción	SONG A
Selección de toque	MIDDLE
Transposición	C

Item	Ajuste
Afinación	A4 = 440,0Hz
Curvas de afinación	Tipo estándar (PIANO 1)
Temperamento	Temperamento uniforme, nota fundamental C
Altura tonal barroca	Desactivado
Canal básico	Canal 1
Modo multitimbre	Desactivado
Control local	Activado
Modo de cambio de programa	Tipo 1

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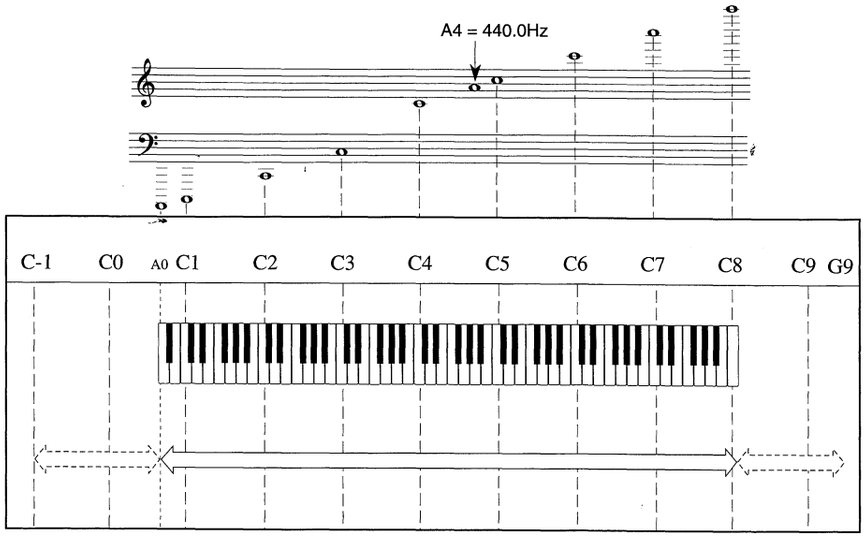
Note Table

Tabla de notas



a ..... Keyboard range
..... Gama del teclado

b ..... Note range (when receiving MIDI data)
..... Gama de nota (para la recepci n MIDI)

c ..... Area for which the same note in the nearest octave is substituted (when receiving MIDI data)
..... Area para la cual se sustituye la misma nota en la octava m s cercana (para la recepci n de datos MIDI)

Model **AP-21/AP-23** **MIDI Implementation Chart** Version: 1.0

Function ...		Transmitted	Recognized	Remarks
Basic	**Default**	1	1	
Channel	**Changed**	1-16	1-16	
Mode	**Default**	Mode 3	Mode 3	
	Messages	X	X	
	Altered	**********		
Note		21-108	0-127	
Number:	**True voice**	**********	21 - 108	
Velocity	**Note ON**	O 9n V = 1-127	O 9n V = 1-127	
	Note OFF	X 9n V = 0	X 9n V = 0, 8n V = **	** = no relation
After	**Key's**	X	X	
Touch	**Ch's**	X	X	
Pitch Bender		X	X	
	64	O	O	Damper
	66	O	O	Sostenuto } *
Control	**67**	O	O	Soft } *
Change	**91**	O	O	Reverb
	92	O	O	Tremolo
	93	O	O	Chorus
Program		O 0-7	O 0-7	Equipped with General MIDI compatible mode (switchable type).
Change:	**True #**	**********	0-7	
System Exclusive		O	O	Layer
System	**: Song Pos**	X	X	
Common	**: Song Sel**	X	X	
	: Tune	X	X	
System	**: Clock**	O	X	
Real Time	**: Commands**	O Start, Stop	X	
Aux	**: Local ON/OFF**	X	X	
	: All notes OFF	X	X	
Messages	**: Active Sense**	X	X	
	: Reset	X	X	
Remarks		* Selectable (Both cannot be used at the same time.) (AP-21 only) See "MIDI Data Notes" on page E-29. See "Notas sobre los datos MIDI" on page S-27.		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O: Yes
X: No

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